

## ABSTRACT

A radiation detector includes a plurality of scintillators (1) two-dimensional arranged, a plurality of separators (2) each disposed between adjacent scintillators (1), and a photodiode array (4) that  
5 includes a plurality of photodiodes arranged on the side plane of a scintillator array (3) so that the photodiodes correspond to the scintillators (1). The radiation detector also includes a plurality of photomultipliers (5) arranged on the downstream of the scintillator array (3) in a direction of the radiation reception to correspond to the  
10 scintillators (1), and a circuit board (6) that outputs an electrical signal obtained by the photomultiplier (5) to the outside. A mechanism of receiving lights derived from different radiations is arranged in the identical scintillator (1) to prevent misalignment in spatial distributions obtained through detection on the different radiations.